

Abstract of the Disclosure

The use of enzymes which catalyze the production of starter and extender units for polyketides is described. These enzymes may be used to enhance the yield of polyketides that are natively produced or polyketides that are rationally designed. By using these techniques, the synthesis of a complete polyketide has been achieved in *E. coli*. This achievement permits a host organism with desirable characteristics to be used in the production of such polyketides and to assess the results of gene shuffling.